

## RAW SEQUENCE LISTING

**The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.**

Application Serial Number: 10/720,018A  
Source: 1 Fw/16  
Date Processed by STIC: 3/10/06

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IFW16

## RAW SEQUENCE LISTING

DATE: 03/10/2006

PATENT APPLICATION: US/10/720,018A

TIME: 16:13:04

Input Set : A:\2530-120.txt

Output Set: N:\CRF4\03102006\J720018A.raw

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3 <110> APPLICANT: Verho, Ritva
4     Richard, Peter
5     Penttila, Merja
7 <120> TITLE OF INVENTION: New Enzyme for an in vivo and in vitro Utilisation of
8     carbohydrates
10 <130> FILE REFERENCE: 2530-102
12 <140> CURRENT APPLICATION NUMBER: US 10/720,018A
14 <141> CURRENT FILING DATE: 2003-11-24
16 <150> PRIOR APPLICATION NUMBER: US 10/257,821
18 <151> PRIOR FILING DATE: 2003-03-10
20 <150> PRIOR APPLICATION NUMBER: PCT/FI02/00125
22 <151> PRIOR FILING DATE: 2002-02-15
24 <150> PRIOR APPLICATION NUMBER: FI 2003 31307
26 <151> PRIOR FILING DATE: 2003-09-12
28 <150> PRIOR APPLICATION NUMBER: FI 2001 10308
30 <151> PRIOR FILING DATE: 2001-02-16
32 <160> NUMBER OF SEQ ID NOS: 6
34 <170> SOFTWARE: PatentIn version 3.2
36 <210> SEQ ID NO: 1
37 <211> LENGTH: 816
38 <212> TYPE: DNA
39 <213> ORGANISM: Ambrosiozyma monospora
41 <400> SEQUENCE: 1
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44 tgtggtggtt tagctgaagc tttaatcaag ggtttgttgg cctacggttc tgacattgct      120
46 ttgcttgata tcgaccaaga aaagactgct gccaaacaag ccgaatacca caaatacgct      180
48 actgaagaat tgaagttgaa agaagttcca aagatggggt catatgcctg tgatatttct      240
50 gattctgata ccgttcacaa ggtgtttgct caagttgcta aggattttgg taagttgccca      300
52 ttgcacttgg ttaacacagc tggttactgt gaaaacttcc catgtgaaga ttaccagcc      360
54 aagaacgctg agaagatggt gaaggttaac ttgttgggtt ctttgtatgt ttctcaagcc      420
56 tttgctaagc cattgatcaa agaaggatc aagggtgctt ctgttgtttt gattggttct      480
58 atgtctggtg ccattgtcaa cgatcctcaa aaccaagttg tctacaacat gtccaaggct      540
60 ggtgttatcc atttggtctaa gactttggct tgtgaatggg ctaagtacaa catcagagtt      600
62 aattctttta acccagggtta catctacggt cctttgacca agaattgtat caatggtaac      660
64 gaagaattgt acaacagatg gatctctggt atcccacaac aaagaatgtc cgaaccaaag      720
66 gaatacattg gtgctgtttt gtacttgctt tctgaatctg ctgcttcata cactactggt      780
68 gccagcttac tggttgatgg tggtttcact tcttgg      816
71 <210> SEQ ID NO: 2
72 <211> LENGTH: 272
73 <212> TYPE: PRT
74 <213> ORGANISM: Ambrosiozyma monospora
76 <400> SEQUENCE: 2
78 Met Thr Asp Tyr Ile Pro Thr Phe Arg Phe Asp Gly His Leu Thr Ile

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79 1          5          10          15
82 Val Thr Gly Ala Cys Gly Gly Leu Ala Glu Ala Leu Ile Lys Gly Leu
83          20          25          30
86 Leu Ala Tyr Gly Ser Asp Ile Ala Leu Leu Asp Ile Asp Gln Glu Lys
87          35          40          45
90 Thr Ala Ala Lys Gln Ala Glu Tyr His Lys Tyr Ala Thr Glu Glu Leu
91          50          55          60
94 Lys Leu Lys Glu Val Pro Lys Met Gly Ser Tyr Ala Cys Asp Ile Ser
95 65          70          75          80
98 Asp Ser Asp Thr Val His Lys Val Phe Ala Gln Val Ala Lys Asp Phe
99          85          90          95
102 Gly Lys Leu Pro Leu His Leu Val Asn Thr Ala Gly Tyr Cys Glu Asn
103          100          105          110
106 Phe Pro Cys Glu Asp Tyr Pro Ala Lys Asn Ala Glu Lys Met Val Lys
107          115          120          125
110 Val Asn Leu Leu Gly Ser Leu Tyr Val Ser Gln Ala Phe Ala Lys Pro
111          130          135          140
114 Leu Ile Lys Glu Gly Ile Lys Gly Ala Ser Val Val Leu Ile Gly Ser
115 145          150          155          160
118 Met Ser Gly Ala Ile Val Asn Asp Pro Gln Asn Gln Val Val Tyr Asn
119          165          170          175
122 Met Ser Lys Ala Gly Val Ile His Leu Ala Lys Thr Leu Ala Cys Glu
123          180          185          190
126 Trp Ala Lys Tyr Asn Ile Arg Val Asn Ser Leu Asn Pro Gly Tyr Ile
127          195          200          205
130 Tyr Gly Pro Leu Thr Lys Asn Val Ile Asn Gly Asn Glu Glu Leu Tyr
131          210          215          220
134 Asn Arg Trp Ile Ser Gly Ile Pro Gln Gln Arg Met Ser Glu Pro Lys
135 225          230          235          240
138 Glu Tyr Ile Gly Ala Val Leu Tyr Leu Leu Ser Glu Ser Ala Ala Ser
139          245          250          255
142 Tyr Thr Thr Gly Ala Ser Leu Leu Val Asp Gly Gly Phe Thr Ser Trp
143          260          265          270

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146 &lt;210&gt; SEQ ID NO: 3

147 &lt;211&gt; LENGTH: 21

148 &lt;212&gt; TYPE: DNA

149 &lt;213&gt; ORGANISM: Artificial Sequence

151 &lt;220&gt; FEATURE:

152 &lt;223&gt; OTHER INFORMATION: Primer

154 &lt;400&gt; SEQUENCE: 3

155 tataacgcgt ttggaatcac t

21

158 &lt;210&gt; SEQ ID NO: 4

159 &lt;211&gt; LENGTH: 21

160 &lt;212&gt; TYPE: DNA

161 &lt;213&gt; ORGANISM: Artificial Sequence

163 &lt;220&gt; FEATURE:

164 &lt;223&gt; OTHER INFORMATION: Primer

166 &lt;400&gt; SEQUENCE: 4

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21

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173 <213> ORGANISM: Artificial Sequence  
175 <220> FEATURE:  
176 <223> OTHER INFORMATION: Primer  
178 <400> SEQUENCE: 5  
179 gactggatcc atcatgcatc atcatcatca tcatatgact gactacattc caac 54  
182 <210> SEQ ID NO: 6  
183 <211> LENGTH: 32  
184 <212> TYPE: DNA  
185 <213> ORGANISM: Artificial Sequence  
187 <220> FEATURE:  
188 <223> OTHER INFORMATION: Primer  
190 <400> SEQUENCE: 6  
191 atgcggatcc ctatatatac cggaaaatcg ac 32

**VERIFICATION SUMMARY**

DATE: 03/10/2006

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